

REMARKS

Claims 46-69 are currently pending. Claims 1-6, 8-9, 13-15, 41-42 and 43-45 have been cancelled and claims 46-69 have been added.

The Examiner rejected claims 1-6, 8-9, 13-15, 41-42 and 44-45 under 35 U.S.C. §102(b) and 35 U.S.C. §103(a) in view of Ulmer (U.S. Patent No. 1,333,142), Welker (U.S. Patent No. 6,439,267), and Cousimano (U.S. Patent No. 4,302,935).

Applicants have cancelled the rejected claims rendering the rejections moot. However, Applicants have added new independent claims 46 and 58 and dependent claims 47-57 and 59-69, which depend from claim 46 and claim 58 respectively.

New claim 46 defines a tube configured to attach to an engine housing and to guide a fluid. The tube includes a first component having an interior and a bend portion. The bend portion has a curved outer bend surface adjacent the interior and has a first inner bend surface adjacent the interior that has a substantially sharp corner. A second component is positioned adjacent the sharp corner and includes a curved surface that has a second inner bend surface. The second inner bend surface and the outer bend surface cooperate to guide all of the fluid flow through the bend portion.

New claim 58 defines a tube configured to attach to an engine housing and to guide a fluid along a tube interior. The tube includes a bend portion that has a curved outer bend surface adjacent the interior and a curved inner bend surface adjacent the interior. The tube includes a first component that defines the outer bend surface and a sharp corner opposite the outer bend surface and adjacent the interior. A second component is positioned adjacent the sharp corner and includes a curved surface that at least partially defines the curved inner bend surface.

Ulmer does not teach or suggest, among other things, a tube that includes a first component that has a bend portion that includes a curved outer bend surface adjacent an interior and a first inner bend surface adjacent the interior that has a substantially sharp corner. In addition, Ulmer does not teach or suggest a second component positioned adjacent the sharp corner and including a curved surface that includes a second inner bend surface arranged such that the outer bend surface and the second inner bend surface cooperate to guide all of the fluid flow through the bend portion.

Rather, Ulmer discloses a baffle member 5 that is positioned partially within branches 3 and that includes a portion that extends beyond the branches 3. The branches define an inner bend radius and the baffle member partially defines an outer bend radius. There is no inner bend surface that includes a sharp corner. In addition, there is no second component adjacent the sharp corner and defining an inner bend surface, as the baffle of Ulmer is disposed near the outer bend surface and thus cannot define a second inner bend surface.

Welker does not teach or suggest, among other things, a tube that includes a first component that has a bend portion that includes a curved outer bend surface adjacent an interior and a first inner bend surface adjacent the interior that has a substantially sharp corner, and a second component positioned adjacent the sharp corner and including a curved surface that includes a second inner bend surface arranged such that the outer bend surface and the second inner bend surface cooperate to guide all of the fluid flow through the bend portion.

Rather, Welker discloses a flow diffuser that includes a body 12 that defines an inlet 14 and an outlet 16. The diffuser includes an elbow portion that turns the flow approximately 90 degrees. A flow conditioner 30 is inserted near the outermost surface of the elbow and includes a plurality of vanes 50 that cooperate to define a plurality of passageways 52. Thus, Welker does

not teach or suggest an arrangement in which an outer bend surface defined by a first component and a second inner bend surface defined by a second component cooperate to guide all of the flow through the bend portion.

Cousimano does not teach or suggest, among other things, a tube that includes a first component that has a bend portion that includes a curved outer bend surface adjacent an interior and a first inner bend surface adjacent the interior that has a substantially sharp corner. In addition, Cousimano does not teach or suggest a second component positioned adjacent the sharp corner and including a curved surface that includes a second inner bend surface arranged such that the outer bend surface and the second inner bend surface cooperate to guide all of the fluid flow through the bend portion.

Rather, Cousimano discloses a tube T and an insert A. The tube does include a bend that defines an outer bend surface and an inner bend surface. However, the first inner bend surface does not include a sharp corner adjacent the interior. The only sharp corner of the first component is the flange corner which is not disposed adjacent the interior, but rather is disposed outside of the first component and away from the bend portion, as the tube T appears to include a straight portion between the bend portion and the end of the tube T.

Furthermore, the insert A, extends into a straight portion of tube T as is illustrated in Fig. 1. Fig. 1 shows a first line that represents the end of the tube and a second line, parallel to the first line and spaced from the first line. This second line appears to indicate the end of the bend portion and the start of a straight portion that extends from the bend portion to the end of the tube. The insert A stops at this line. As such, the insert cannot include a surface that cooperates with the outer bend surface to guide fluid through the bend portion, as all of the fluid has passed the bend portion before the fluid reaches the insert A.

In light of the foregoing, Ulmer, Welker, and Cousimano, alone or in combination do not teach or suggest each and every limitation of claim 46. As such claim 46 is allowable over Ulmer, Welker, and Cousimano. Claims 47-57 depend from claim 46 and include additional limitations. Claims 47-57 are allowable over Ulmer, Welker, and Cousimano for the reasons set forth with regard to claim 46 as well as for other reasons. Claim 58 contains limitations similar to those of claim 46. As such, claim 58 is allowable over Ulmer, Welker, and Cousimano, as are claims 59-69 which depend from claim 58.

CONCLUSION

In light of the foregoing, Applicants respectfully submit that claims 46-69 are allowable. The undersigned is available for telephone consultation during normal business hours.

Respectfully submitted,


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Docket No.: 018367-9805-00
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